

REMARKS

Receipt is acknowledged of the Office Action of November 30, 2004. Claims 1-27, are currently pending in the application. Claims 1-8, 10-15, 17, 19, 21-23 and 25-27 have been rejected in the Office Action. Applicant amended independent Claims 1, 10, 19 and 23. Claims 9, 16, 18, 20 and 24 were indicated as allowable if rewritten in independent form. Applicant thanks the Examiner for this early indication of the allowable subject matter and requests reconsideration of the rejection, as explained in more detail below.

Claims 1, 2, 4, 6-7, 10-11 and 13-15 were rejected by the Examiner under 35 U.S.C. 102(e) as allegedly being anticipated by U.S. Patent No. 5,246,294 ("Pan"). According to the Examiner, Pan discloses "all claimed subject matter" in its Fig. 3. Applicant respectfully disagrees with the Examiner and directs his attention to the amended claims of the present application.

As described in the present specification and claimed in the amended claims, the invention is a hydrodynamic bearing system including a shaft, a bearing sleeve, and a bearing member mounted on an outer surface of the shaft. A bearing gap filled with lubricating fluid is formed within the bearing member. Further, the bearing system includes a fluid trap member formed outside the bearing gap such that the fluid trap member is integrated into the bearing member. This construction of the fluid trap member results in a fluid trapping cavity being formed outside the bearing gap between the fluid trap member and a surface of the bearing member. Accordingly, independent Claim 1 now recite the limitations of:

"a bearing gap formed within said at least one bearing member; and
a fluid trap member located outside said bearing gap,

wherein said fluid trap member is integrated into said at least one bearing member and wherein a fluid trapping cavity is formed outside said bearing gap between said fluid trap member and a surface of said at least one bearing member"

Amended independent Claims 10, 19 and 23 now recite similar limitations.

Pan discloses a hydrodynamic bearing assembly 100 having a shaft 102, a bearing member and a continuous bearing gap G, G' filled with lubricating fluid during normal operation of the disclosed bearing assembly. In contrast to the claimed invention, Pan does not disclose the bearing system having a "fluid trap member located outside said bearing gap," and being "integrated into said at least one bearing member" and "formed outside said bearing gap between said fluid trap member and a surface of said at least one bearing member." Instead, in the bearing assembly 100 disclosed by Pan only end caps 162 may trap some fluid from escaping the assembly. Thus, the bearing system of the presently claimed invention having a fluid trap integrated into the bearing member and located outside the bearing gap contrasts sharply with the bearing assembly having end caps disclosed in Pan. Based on the above, Applicant believes that the above limitations of independent Claims 1, 10, 19 and 23 are not met by the cited Pan reference. Claims 1, 10, 19 and 23 are believed to be patentable over the prior art of record.

Dependent Claims 2-9, 11-18, 20-22 and 24-27, are rejected over the same Pan reference. Applicant respectfully submits that dependent Claims 2-9, 11-18, 20-22 and 24-27 are believed to define patentable subject matter in view of their dependency upon allowable Claims 1, 10, 19 and 23 and, further, on their own merits.

In the Office Action, the Examiner further rejected Claims 2, 4, 11, 13, 19, 21-23, and 25-27 under 35 USC 112, first and second paragraphs because the Examiner believes that the

term "low" is a relative term not adequately defined by the claims and the specification.

Applicants respectfully submits that the term "low surface tension" has a well defined meaning in the art. A person of ordinary skill in the art would have clearly understood that the surface energy of the material identified as having "low surface tension" is lower than the surface energy of the lubricating fluid placed in contact with this material. Applicant amended the rejected claims with this well known definition of "low surface tension."

Based on the above, it is believed that the rejections and objections of Claims 1-27 should be withdrawn. Claims 1-27 are believed to be in a condition for allowance, which action is respectfully requested.

In view of the above, the Applicant submits that the disclosed invention is patentable over the prior art. The Patent and Trademark Office is authorized to charge any fees required for the entry of this Response, including fees for an extension of time, and any further fees that are properly assessable in this case, or to credit any overpayment, to Deposit Account No. 50-0675, Order No. 057517-0017. In the event that an extension of time is needed for entry of this Response that is not otherwise provided for, such extension of time is hereby respectfully requested.

Respectfully submitted,
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